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The relationship between sex-role classification and activity, and trait and state anxiety

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THE RELATIONSHIP BETWEEN SEX-ROLE CLASSIFICATION AND ACTIVITY, AND TRAIT AND STATE ANXIETY

by

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An Abstract

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Abstract

The effect of sex-role classification and activity on state anxiety and the difference in trait anxiety across sex-role classifications were investigated. During a 20-minute classification testing session, 126 female undergraduate students of Ithaca College were administered the Bem Sex Role Inventory (BSRI), and the State-Trait Anxiety Inventory (STAI) A-trait scale. Subjects were classified as masculine, feminine, or androgynous. From this pool, 42 subjects were randomly selected to participate in further testing. During a 1½-hour treatment testing session, subjects participated in three activities (2 sex-typed activities, 1 neutral activity). Immediately following each activity, each subject completed an STAI A-state scale. No significant differences were found between trait anxiety scores across sex-role classifications. Only the main effect of activity was found significant after analyzing differences between state anxiety scores as effected by sex-role classification and activity. Test-retest reliability was calculated on 50% of the subjects for the BSRI using the repeated measures chi-square test of association, yielding a similarity in patterns of sex-role classification from test to retest. The Pearson product-moment correlation was performed on the scales of the BSRI yielding $\underline{r}$ = .87 for the masculine scale, and $\underline{r}$ = .72 for the feminine scale. A test-retest reliability

was calculated for the STAI A-trait scale yielding a Pearson product-moment correlation coefficient of .84. Results were discussed as failing to support the theory of androgyny. Nature of activity as well as type of activity was deemed responsible for changes in state anxiety levels.

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A Thesis Presented to the Faculty
of the School of Health, Physical
Education and Recreation
Ithaca College

In Partial Fulfillment of the
Requirements for the Degree
Master of Science

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by
Christine Elizabeth Bergh
September 1980

Ithaca College
School of Health, Physical Education and Recreation

CERTIFICATE OF APPROVAL

MASTER OF SCIENCE RESEARCH THESIS

This is to certify that the Thesis of

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submitted in partial fulfillment of the requirements for the degree of Master of Science in the School of Health, Physical Education, and Recreation at Ithaca College has been approved.

Thesis Advisor:

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Dean of Graduate Studies:

Date: Sept. 1, 1980

DEDICATION

I dedicate my thesis to my parents, Howard and Constance Bergh. Their constant support and encouragement were invaluable in helping me to complete graduate school thereby enabling me to pursue my dreams.

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Chapter 1

INTRODUCTION

In our ever changing world, there are few institutions, values, and practices left unchallenged. One practice that is challenged is sex-role stereotyping, i.e., the practice of assigning certain types of behaviors to individuals on the basis of gender. Before an investigation of sex roles can be undertaken, a clarification of the terms gender identity, sexual preference, and sex-role identity must be made. Gender identity refers to one's biological classification as male or female, determined by the genitalia that one possesses. Sexual preference refers to one's choice of a partner with whom to engage in mating behaviors and the sex act. Sex-role identity can be defined in terms of the personality traits possessed by an individual, with reference to the embodiment of "feminine" and/or "masculine" attributes. Although one's sex-role identity can be influenced by gender identity and sexual preference, these three terms are not synonymous. This study focuses upon the concept of sex-role identity, its measurement, and classification.

Throughout the evolution of the human species and of mammalian animals in general, there have been certain physical and behavioral characteristics associated with the female of the species and others associated with the male. The female's main duties centered around bearing and caring

for offspring while the male's role was to provide for and protect the family. Anatomically, the average male is larger and usually stronger than the average female. This biological foundation has supported a generalization in the use of the terms masculine and feminine, assigning specific characteristics to each (Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968). Masculine has come to mean strong, aggressive, and independent with its major focus on an instrumental, agentic orientation (Bem, 1976; O'Leary, 1976). Feminine has come to mean tender, passive, and dependent, focusing on a communal, warm, expressive orientation (Bem,1976; O'Leary, 1976). As a modern society evolved from the Victorian era, these terms became equated with "masculinity" and "femininity" as descriptors of both physical and psychological traits, manifested through behavior. Western civilization embraced these concepts of masculinity and femininity as mutually exclusive of one another, each representing the vital personality characteristics of its own gender.

Within the last decade, men and women have crossed the boundaries defined by traditional sex roles allowing behavior to be governed by situation rather than gender (Bem, 1976). This study investigates the influence of sex-role identity and sex-typed activity on levels of state and trait anxiety.

Scope of Problem

The theory of androgyny supports an individualistic approach to sex-role classification. It promotes the idea that a person should develop his/her role in life on the basis of individual traits rather than on gender identity. It further asserts that: (a) a person (whether male or female) with predominantly feminine traits will feel more comfortable when engaging in feminine type behavior, (b) a person (whether male or female) with predominantly masculine traits will feel more comfortable when engaging in masculine type behavior, and (c) a person with an equally high balance of masculine and feminine traits will feel comfortable engaging in either feminine or masculine type behaviors. Any attempt by a highly feminine or a highly masculine person to cross behavioral lines will result in negative or conflicting feelings for that person (Bem & Lenney, 1976).

With this explanation as the empirical model, the effect of engaging in cross-role activity will be tested with regard to level of anxiety. Three paper and pencil tests will be employed to assess sex-role identity, trait anxiety, and state anxiety. They are (a) the Bem Sex Role Inventory, (b) the State-Trait Anxiety Inventory (A-trait scale), and (c) the State-Trait Anxiety Inventory (A-state scale), respectively.

Statement of Problem

The study proposes to identify subjects as masculine, feminine, androgynous, or undifferentiated using the Bem Sex Role Inventory. Those individuals identified as undifferentiated will be eliminated from the study due to inconsistency of results obtained from this group in previous studies (Bem, 1977; Spence, Helmreich, & Stapp, 1975). Subjects will also complete the State-Trait Anxiety Inventory (A-trait scale) to establish a trait anxiety level. At a later date, the subjects will be asked to complete a typically masculine, a typically feminine, and a neutral activity. Immediately following the completion of each activity they will complete the State-Trait Anxiety Inventory (A-state scale). The results of the State-Trait Anxiety Inventory A-trait and A-state scales will be compared within as well as across sex-role classifications and sex-typed activities in order to ascertain what differences might exist.

Hypotheses

If the theory of androgyny is correct, feminine subjects should report the highest level of trait anxiety of the three groups tested. A within-cell comparison of state anxiety levels should show masculine subjects reporting low state anxiety while performing the masculine activity and high state anxiety while performing the feminine activity.

Accordingly, such a comparison should show feminine subjects reporting low state anxiety while performing the feminine activity and high state anxiety while performing the masculine activity. Androgynous subjects should report equally low state anxiety for each activity.

In comparing the levels of state anxiety of a given activity across all three cells, it is hypothesized that: (a) for the feminine activity, masculine subjects will reveal higher anxiety than either feminine or androgynous subjects, (b) for the masculine activity, feminine subjects will reveal higher anxiety than either masculine or androgynous subjects, and (c) for the neutral activity, all subjects will reveal equally low anxiety.

Assumptions

The following assumptions are made in accordance with the study:

1. Self-report measures of personality traits and anxiety levels are reasonably accurate representations of observable behavior.

2. The responses of each subject on each of the self-report measures are honest and yield valid results.

3. A 7-minute activity period for each activity was of adequate duration to sensitize the subjects to the presence or absence of a potential role conflict.

Definition of Terms

In accordance with the design of the study, the following stipulative definitions are presented:

1. Androgyny: the integration of a high degree of both masculine and feminine personality characteristics within an individual, as measured by the Bem Sex Role Inventory.

2. Femininity: the predominance of feminine personality characteristics within an individual, as measured by the Bem Sex Role Inventory.

3. Masculinity: the predominance of masculine personality characteristics within an individual, as measured by the Bem Sex Role Inventory.

4. State anxiety: a transitory state or condition, "characterized by consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic system" (Spielberger, 1966, pp. 16-17), as measured by the STAI A-state scale.

5. Trait anxiety: a behavioral disposition that causes an individual to perceive a wide range of stimuli as threatening, and to respond to these stimuli with "reactions disproportionate in intensity to the magnitude of the objective danger" (Spielberger, 1966, p. 17), as measured by the STAI A-trait scale.

Delimitations

The following delimitations acted as guidelines and boundaries for the study.

1. The subjects were female undergraduate students at Ithaca College.

2. Sex-role identity was measured by the Bem Sex Role Inventory.

3. Levels of state and trait anxiety were measured by the State-Trait Anxiety Inventory.

Limitations

1. The sample was not necessarily representative of the general population.

2. In the recent androgyny literature (Hogan, 1977; Kelly, Furman, & Young, 1978), questions were raised concerning serious limitations involved in comparing research when different sex-role inventories were used. Consequently, the results of any given study may not be generalizable across all sex-role research if a variety of sex-role measures are employed.

Chapter 2

REVIEW OF LITERATURE

This chapter is designed to provide a broad understanding of the concept of androgyny. The concept of androgyny, and recent developments in its measurement will be discussed. The premise of behavioral adaptability as the basis for this study will be explained, citing empirical examples that support and fail to support this aspect of the theory. Finally, the concepts of state and trait anxiety will be defined through the literature showing their relationship to androgyny and in particular demonstrating their specific function in this study.

Construction, Development, and Analysis of the BSRI

Until recently, masculinity and femininity as constituents of personality have been conceptualized as bipolar ends of a single continuum (Bem, 1974; Constantinople,1973; Rosenkrantz et al., 1968; Spence, Helmreich, & Stapp, 1974), "accordingly a person has had to be either masculine or feminine, but not both" (Bem, 1974, p. 155). Scholars of androgyny assert that there are no theoretical justifications for this bipolar assumption, suggesting instead that masculinity and femininity be regarded as independent dimensions, allowing the individual to possess both masculine and feminine attributes simultaneously (Bem, 1974; Constantinople, 1973;

Hielbrun, 1976; Spence et al., 1975).

In 1974, Sandra Bem presented a new measure of androgyny that treated masculinity and femininity as two separate dimensions, making it possible to characterize a person as masculine, feminine, or androgynous. The Bem Sex Role Inventory (BSRI) consisted of three separate scales: the masculine (M) scale, the feminine (F) scale, and the neutral (N) scale. A person scoring high on the M scale and low on the F scale classified as masculine. A person scoring low on the M scale and high on the F scale classified as feminine. If the difference between the scores achieved on the M and F scales was low or if there was no difference, the person was classified as androgynous.

Since its origin in 1974, the BSRI has been used widely as a more accurate measure of sex-role identity than its predecessors, the bipolar measures. Consequently, the BSRI has been examined, analyzed, and criticized. The remainder of this section will address the various critiques of the BSRI and delineate the transformations it has endured.

In testing sex-role identity with the Personality Attributes Questionaire (PAQ), Spence et al. (1975) discovered a difference in those androgynous subjects who scored low on both M and F scales and those who scored high on both scales. In comparing levels of self-esteem, those androgynous

subjects scoring low on both rated the lowest of all sex-role classifications on self-esteem. Contrarily, those androgynous subjects who scored high on both scales rated highest in self-esteem. It was reasoned that the differences found on the self-esteem scores were indicative of other fundamental differences in the characters of the two androgynous types. These findings compelled Bem (1977) to alter her conclusions about the no difference androgyny score and to reclassify subjects through the use of the median split technique. In this way, subjects who scored high on both the M and F scales were labelled androgynous while those who scored low on both scales were labelled undifferentiated.

Several researchers have completed studies analyzing the construction and utility of the BSRI, resulting in a fairly equal number of supporters and antagonists of this inventory. Attesting to the multidimensionality of the BSRI, Wakefield, Sasek, Freidman, and Bowden (1976) stated, "Bem has shown that the M and F scales are essentially uncorrelated or independent" (p. 766). Similarly, Berzins, Welling, and Wetter (1978) endorsed the BSRI in the construction of their own sex-role measure, the PRF ANDRO. "It was inspired by and drew its theoretical rationale from Bem's BSRI . . ." (p. 127).

In 1977, Hogan questioned the construct validity of the BSRI after correlating results with the Symbolic Sex Role

Measure (consisting of artwork) and the Verbal Traditionalist Sex Role Measure (statements concerning sex roles). All correlations were near zero indicating little similarity between the measures.

Stating that the BSRI scores were bipolar, the findings of Sines and Russell (1978) directly contradicted those of Wakefield et al. (1976). Upon comparing the results obtained by scoring the BSRI in a bipolar fashion to those obtained by the standard scoring procedure, Sines and Russell concluded that regardless of the scoring method "resulting scores will rank a group of persons in essentially the same manner" (p. 55).

Kelly, Furman, and Young (1978) focused their research upon the generalizability of androgyny research. They reviewed numerous studies that had employed the BSRI, PAQ, PRF ANDRO, and the Adjective Check List as measures of sex-role identity. Their findings raised serious questions concerning the comparability of research results when different androgyny tests were used.

In 1979, Bem wrote an article in reply to certain criticisms of the BSRI in which she restated the basic theory underlying the construction of the BSRI. "The BSRI is thus based on theory about both the cognitive processing and the motivational dynamics of the sex-typed and androgynous individuals" (p. 1048). She continued, delving beneath the

superficial definition of androgyny to conclude that:

> individuals of different sex roles are not viewed here as differing primarily in terms of how much masculinity or femininity they possess, but rather, they are viewed as differing more fundamentally (a) in the content of their beliefs about what the two sexes are like and (b) in their cognitive schemata for processing gender related information, and hence in the perceptual salience and cognitive availability of gender and gender related concepts as dimensions for processing incoming information. (p. 1053)

A complete comprehension of the theory of androgyny far surpases the simple endorsement of traits. Accordingly, the consequences realized through the application of the androgyny theory are complex and far reaching. The following section will deal with one such consequence of the androgyny theory.

Androgyny and Behavior

One of the major premises upon which the theory of androgyny is founded is that of behavioral adaptability. The androgynous person is conceptualized as having an equally high balance of "masculine" and "feminine" personality traits enabling one to behave in accordance with the needs of the situation (Bem, 1977; Spence et al., 1975). In contrast, the person having a sex role that is either sex-typed (i.e., masculine

male or feminine female) or sex-crossed (i.e., feminine male or masculine female) is believed to be behaviorally limited and unable to respond effectively to the needs of any given situation but only to those situations found compatible with their sex role (Bem, 1972). The next two sections report findings that support the superior behavioral adaptability of the androgynous individual as well as those that fail to support this premise.

Androgyny Literature Supporting Behavioral Adaptability

In 1975, Sandra Bem reported the results of a study that was designed "to demonstrate both the behavioral adaptability of the androgynous individual, as well as the behavioral restriction of the person who is not androgynous" (p. 635). Male and female subjects involving the full range of sex-role identities were observed in a typically masculine and a typically feminine situation. Results showed that androgynous subjects were able to perform well in either situation with sex-typed and sex-crossed subjects showing deficiencies in either one or both situations.

Heilbrun (1976) tested 1,383 college students with an adapted form of the Adjective Check List utilizing separate scales to measure masculinity and femininity. He concluded that androgynous subjects were better socially adjusted than sex-typed subjects.

In a study designed to elicit feminine nurturant

behaviors from male and female subjects of all sex-role identities, Bem, Martyna and Watson (1976) found evidence to support the behavioral superiority of the androgynous sex role. Regardless of gender, androgynous subjects demonstrated more nurturant behavior than masculine subjects, with no significant differences between the nurturant behaviors of androgynous and feminine subjects.

Bem and Lenney (1976) conducted a study involving both androgynous and non-androgynous subjects. They required some non-androgynous subjects to take part in both masculine and feminine situations, while allowing other non-androgynous subjects to bypass the behavior that was incongruent with their sex-role identity. The majority of non-androgynous subjects, when allowed to bypass the adverse activity did so, while those forced to execute both activities reported "greater psychological discomfort and more negative feelings about themselves" (p. 48).

In 1977, Nevill reported the results of a study that examined the relationship between psychological health, effective social functioning, and sex-role identity. She administered the Tennessee Self Concept Scale, the Personal Orientation Inventory, and the BSRI, respectively, to measure these characteristics. Results supported a strong relationship between androgyny and psychological health, and between androgyny and social effectiveness, indicating that the

androgynous person was more well rounded and better able to deal with a variety of situations than the non-androgynous person.

Schiff and Koopman (1978) tested self-esteem and ego development in 153 female undergraduates at the University of Maryland. Androgynous subjects scored high in both areas, while feminine and masculine subjects reported deficits in self-esteem and ego development, respectively.

Although these studies have used a variety of methods to measure behavioral adaptability (i.e., self-report forms, observations, etc.), investigators have arrived at a common conclusion. The androgynous individual with a high degree of both masculine and feminine personality characteristics was able to adapt to a variety of situations with an effective behavioral response. Conversely, the sex-typed and sex-crossed individuals with a high degree of masculine or feminine personality characteristics were limited in their behavioral repertoire to those types of behaviors that were compatible with their own sex-role identity. Consequently, the non-androgynous person was denied involvement in many situations that would add to the experience, maturation, and growth of the individual.

In addition to the studies supporting the explanation of behavioral adaptability as asserted by the androgyny theory, there is empirical evidence that fails to support the

theory. The following section presents findings of several studies that fall into this category.

Androgyny Literature Not Supporting Behavioral Adaptability

In a study involving 75 female undergraduates at Ohio University, Ginn (1975) compared sex-role identity as measured by the BSRI with self-actualization as measured by the Personal Orientation Inventory. "Contrary to prediction androgynous subjects scored no differently on the measures of self-actualization than either masculine or feminine subjects" (p. 886). These findings do not lend support to the belief that the androgynous individual is better adjusted and better able to engage in a variety of situations, dealing effectively with each.

A doctoral dissertation by Waters (1977) investigated the relationships of sex-role identity, empathy, state and trait anxiety, and intelligence. It was hypothesized that the androgynous subjects with a broader experiential background would rate higher on empathy and lower on state anxiety. Results yielded no significant differences in empathy or state anxiety levels across sex-role classifications. Further investigation showed that trait anxiety was negatively correlated with masculinity. In contrast with earlier findings (Bem, 1976; O'Leary, 1976), which stated that femininity correlated highly with trait anxiety, Waters concluded that masculinity was the important variable

associated with trait anxiety. In other words, it was not the presence of femininity that indicated anxiousness but the absence of masculinity.

Jones, O'Chernovetz, and Hansson (1978) summarize Bem's theory of androgyny by explaining that:

> the androgynous individual who identifies with both desirable masculine and desirable feminine characteristics is freed from such stereotypic sex role limitations and is able to more comfortably and effectively engage in both masculine and feminine behaviors across a variety of social situations. Thus, the concept of androgyny denotes a person who is flexible, socially competent, able to respond to shifting situational demands and more complete and actualizing in the sense of developing and maximizing personal potential. (p. 298)

They examined responses obtained from 1,404 male and female undergraduates using the BSRI, in relation to adaptability, coping, flexibility, and competence. Their results failed to support the androgyny theory and allowed them to conclude that:

> the notion that androgynous subjects would yield the most desirable pattern of responses across several situations is directly contradicted by the present data, in that . . . the more adaptive, flexible,

> unconventional, and competent patterns of responding occurred among more masculine subjects, independent of their gender. (p. 311)

In addition to the premise concerning behavioral adaptability, the theory of androgyny confronts many other aspects of human functioning. One such aspect concerns society's definition of mental health. The following section deals with a specific condition associated with mental health, namely anxiety. This section will explain what is meant by the terms state and trait anxiety, but more specifically, how they are related to androgyny.

State and Trait Anxiety

State anxiety refers to a transient or momentary condition "characterized by subjective consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system " (Spielberger, 1966, pp. 16-17). These anxiety states (A-states) may vary in intensity and fluctuate over time (Finch, Kendall, Montgomery, & Morris, 1975; Newmark, Faschingbauer, & Finch, 1975; Spielberger, 1966). The frequency of occurrence of A-states depends largely upon the individual and his/her perception of a given situation as dangerous or threatening. This is greatly influenced by an individual's past experience (Spielberger, 1970). If a situation poses a direct or implied threat to an individual's

self-esteem or is cognitively appraised by an individual as dangerous or threatening, then an A-state reaction is evoked (Finch et al., 1975; Spielberger, 1966).

Trait anxiety refers to individual differences in proneness to experience anxiety, or to a "behavioral disposition that predisposes an individual to perceive a wide range of objectively nondangerous circumstances as threatening . . ." (Spielberger, 1966, p. 17). Trait anxiety is a relatively permanent personality characteristic that remains stable over time (Finch et al., 1975; Newmark et al., 1975; Spielberger, 1966). If a person is highly trait anxious, it implies two things; first, this individual would perceive a wide range of stimulus situations as dangerous regardless of the real objective danger, and second, this individual would have a tendency to respond to such threats with state anxiety reactions (Spielberger, 1966). A highly trait anxious person would also be more inclined to respond with state anxiety to a situation involving interpersonal relationships or some threat to self-esteem (Spielberger, 1970). Trait anxiety is also determined to some degree by past experience (Spielberger, 1966).

State and trait anxiety are believed to be independent of the stimuli which evoke anxiety states. Their interdependence upon one another depends primarily on the particular stimuli or situation:

> Level of A-trait is not expected to influence A-state responses to all stimuli; only to particular classes of stimuli . . . For such stimuli, however, individual differences in A-state reaction may vary as a function of other acquired behavioral dispositions. (Spielberger, 1966, p. 18)

The State-Trait Anxiety Inventory (STAI) developed by Spielberger, Gorsuch, and Lushene in 1968 measures both state and trait anxiety. On this inventory:

> Low scores were expected to reflect states of calmness and serenity, intermediate scores were designed to indicate moderate levels of tension and apprehensiveness, and high scores were to correspond with intense states of fright and apprehension, approaching panic. (Spielberger, & Diaz-Guerrero, 1976, p. 9)

Research dealing specifically with anxiety as related to androgyny has been scarce and researchers involved in this area have reported rather conflicting and inconclusive results. Jordan-Viola, Fassberg, and Viola (1976) examined the relationship between active participation in the feminist movement, psychological androgyny, and manifest anxiety. After testing 480 women on the BSRI and the Taylor Manifest Anxiety Scale (TMAS), they found a positive correlation between anxiety and androgyny (r=.19), and a negative correlation for both masculinity and femininity and anxiety (r=-.27).

These findings conflict directly with those of Bem (1976), Gove (1976), Jones et al. (1978), and O'Leary (1976).

In 1977, Waters investigated the relationships among sex-role identity, empathy, state and trait anxiety, and intelligence, reporting that "sex typing does not appear to have a significant effect on state anxiety . . ." (p. 35). Trait anxiety did not correlate with highly sex-typed individuals as predicted, but correlated negatively with masculinity.

Summary

Within the last decade the measurement of androgyny has been refined, reflecting the independent dimensions of masculinity and femininity, making it possible to characterize a person as masculine, feminine, or androgynous (Bem, 1974). The major premise of behavioral adaptability as related to androgyny was presented offering empirical evidence both supporting and failing to support this aspect of the theory. State and trait anxiety as monitors of internal arousal, apprehension, and tension were discussed. Although there have been few studies dealing directly with androgyny and anxiety, interest in the nature of their relationships and inconsistency in the results of previous studies warrants further investigation in this area.

Chapter 3

METHODS AND PROCEDURES

This chapter delineates and explains the necessary steps involved in the data collection process. In particular, it describes the subjects and how they were selected as well as the self-report measures employed. The design of the study required two separate testing sessions.

Selection of Subjects

The subjects were female undergraduate students (N = 42) enrolled at Ithaca College for spring semester 1980. Their ages ranged from 18-21 with more than 75% of the subjects between 18 and 19 years of age. Although the major courses of study of the subjects ranged across several disciplines, the majority of the subjects were majoring in physical education or physical education related areas.

During the first testing session, the subjects completed an information sheet (Appendix A), an informed consent form (Appendix B), the Bem Sex Role Inventory (BSRI) (Appendix C), and the State-Trait Anxiety Inventory (STAI) A-trait scale (Appendix D). According to the results of the BSRI, subjects were classified as masculine, feminine, androgynous, or undifferentiated. Those individuals classified as undifferentiated were eliminated from the study due to the inconsistent results obtained from this group in previous studies (Bem, 1977; Spence et al., 1975). This testing session screened a

potential 126 subjects, of which 46 were scheduled for further testing. Four subjects were subsequently lost as a result of subject attrition, leaving 42 subjects for the final testing session. There were 13 masculine, 16 feminine, and 13 androgynous subjects involved in the treatment testing session.

Selection and Description of Tests

Bem Sex Role Inventory

The Bem Sex Role Inventory (BSRI) was chosen as a measure of personality characteristics that are involved in determining sex-role identity. This test is one of the few measures available that treats masculinity and femininity as two separate dimensions, making it possible to characterize a person as masculine, feminine, or androgynous (Bem, 1974). The BSRI is a paper and pencil test consisting of three scales: (a) masculinity (M) scale, (b) femininity (F) scale, and (c) neutral (N) scale. Each scale lists 20 traits that the subjects must rate on a 7-point scale as each describes themselves. A mean of the raw score is computed for each individual on each scale. These means are compared to the standard medians established by the 1978 Stanford sample and subjects are classified accordingly. The four possible categories are (a) feminine (low M, high F), (b) masculine (high M, low F), (c) androgynous (high M, high F), or (d) undifferentiated (low M, low F). Since its origin, the BSRI

has been used widely with a reported test/retest reliability of r = .90 for the masculinity scale, and r = .90 for the femininity scale (Bem, 1974).

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory (STAI) was chosen as the only available test able to measure both trait anxiety and state anxiety of a given experimental situation. The STAI is a paper and pencil test consisting of two independent forms. The A-trait scale measures trait anxiety or the anxiety proneness of the individual. The A-state (Appendix E) scale measures the state anxiety evoked by the situation. Each scale consists of 20 statements, each of which must be answered on a 4-point scale as it pertains to the respondent. The STAI has been used in different testing situations. For female undergraduate students, a 20-day test/retest reliability of r = .76 has been reported for the A-trait scale, and an r = .27 for the A-state scale (Spielberger, 1970). In view of the nature of the STAI A-state test this correlation coefficient is not interpreted as unusually low. The A-state scale measures transient, momentary conditions of anxiousness that fluctuate over time (Finch et al., 1975; Newmark et al., 1975; Spielberger, 1966).

Data Collection Procedure

Classification Testing Session

1. After receiving permission from the instructors,

volunteers (N = 126) were solicited by the experimenter during class and practice times.

2. Upon receiving approval of the human subjects committee, the experimenter secured permission from each subject for participation in the study, via the informed consent form.

3. The subjects completed an information sheet, the BSRI, and the STAI A-trait scale.

Following this session, the BSRI was scored and the subjects were grouped in one of the following categories: (a) masculine, (b) feminine, (c) androgynous, or (d) undifferentiated. The undifferentiated subjects were eliminated from the study. Subjects were randomly selected and scheduled for the second testing session, with the sex-role categories numbering 14 masculine, 16 feminine, and 16 androgynous subjects. As a result of subject attrition, the final cell categories contained 13 masculine, 16 feminine, and 13 androgynous subjects (N = 42). The second testing session allowed for six possible testing times. Each group tested consisted of a mixture of masculine, feminine, and androgynous subjects. Subjects per session numbered from 4 to 11.

Treatment Testing Session

During this session, the subjects participated as a group in one masculine activity (floor hockey), one feminine activity (a ballet sequence), and one neutral activity (marching). The order in which the activities were presented

was rotated to eliminate testing bias. The subjects were instructed to be aware of their moods while engaging in each activity.

1. Standardized instructions for the treatment testing session were read (Appendix F).

2. Standardized instructions for the first activity were read (Appendix G). Appropriate equipment was distributed to each participant.

3. Subjects participated in the first activity for 7 minutes.

4. Upon completion of the first activity, the subjects completed an STAI A-state scale.

5. Standardized instructions for the second activity were read (Appendix G). Appropriate equipment was distributed to each participant.

6. Subjects participated in the second activity for 7 minutes.

7. Upon completion of the second activity, the subjects completed an STAI A-state scale.

8. Standardized instructions for the third activity were read (Appendix G). Appropriate equipment was distributed to each participant.

9. Subjects participated in the third activity for 7 minutes.

10. Upon completion of the third activity, the subjects completed the STAI A-state scale.

11. Since a time interval of 2-4 weeks had elapsed between the classification testing session and the treatment testing session, it was possible at this time to readminister the BSRI and the STAI A-trait scale to obtain a test/retest reliability rating on these instruments. Subjects were randomly selected to participate in the retest.

12. Subjects were thanked and dismissed.

Scoring of Data

An original pool of 126 subjects was tested on the BSRI using the BSRI as a sex-role screening device to locate 15 masculine, 15 feminine, and 15 androgynous subjects for further testing. The BSRI data were analyzed by the computer (SPSS program) utilizing the median split technique with standard medians of M = 4.95 and F = 4.90 established by Bem with the 1978 Stanford sample. Subjects were categorized as masculine, feminine, androgynous, and undifferentiated. The undifferentiated subjects were excluded from further testing. Included in the treatment testing session were 13 masculine, 16 feminine, and 13 androgynous subjects (N = 42).

For these 42 subjects the STAI A-state and A-trait scales were scored manually by tallying the values assigned to each response to arrive at a total raw score for each scale and each administration of a scale. These raw scores

could be converted to normalized T-scores presented by Spielberger (1970) for the purpose of comparison.

Treatment of Data

A test-retest reliability was performed on the A-trait scale by means of the Pearson product-moment correlation method. A test-retest reliability was also performed on the classifications of the BSRI, employing a chi-square of association, and on the M and F scales of the BSRI utilizing the Pearson product-moment correlation method.

Null Hypothesis 1, concerning the differences between the trait anxiety levels of the three sex-role classifications was tested utilizing a one-way analysis of variance to test for differences. The computer program BMD P2V was employed.

Null Hypothesis 2, concerning the differences between state anxiety levels of the three sex-role classifications as influenced by activities was tested. The computer program BMD P2V was employed to test a two-way analysis of variance at the .01 level of probability. The Tukey HSD was planned for the post hoc test for specific comparison of means.

Chapter 4

ANALYSIS OF DATA

The results of the testing involved in this study are presented in this chapter. An explanation of the process of sex-role classification is presented. The test-retest reliabilities of the BSRI and the STAI A-trait scale are reported. Two null hypotheses concerning differences in levels of trait and state anxieties across sex-role classifications are tested and the results of the subsequent analyses are presented in text and in table form.

Classification of Subjects

During the preliminary testing session, 126 female undergraduate students were administered the BSRI as a sex-role screening device. The experimenter sought to locate 15 masculine, 15 feminine, and 15 androgynous subjects to be included in further testing. A median split technique was used, employing the standard medians established by Sandra Bem, based on the 1978 Stanford sample. Median scores of 4.95 for the M scale, and 4.90 for the F scale were used. Subjects scoring above 4.95 on the M scale and below 4.90 on the F scale were designated as masculine. Subjects scoring below 4.95 on the M scale and above 4.90 on the F scale were designated as feminine. Subjects scoring above both of the medians were designated as androgynous. Subjects scoring below both of the medians were designated

as undifferentiated and excluded from further testing.

Reliability of Testing Instruments

STAI A-trait Scale

A total of 42 subjects were involved in the treatment testing session of the study. Thirty (30) subjects (71%) participated in a retest of the State-Trait Anxiety Inventory (STAI) A-trait scale after a 2- to 4-week interval. Pearson product-moment correlation analysis was performed yielding a coefficient of .84.

BSRI

A test/retest reliability was performed on the Bem Sex Role Inventory (BSRI) involving 21 subjects (50%), after a 2- to 4-week interval. A 3 x 3 chi-square of association was performed on the sex-role classifications from test (time 1) to retest (time 2). Although the number of subjects tested was not large enough to support a 3 x 3 repeated measures chi-square of association, there was a pattern evidenced by the responses given from time 1 to time 2. This pattern is reported in Table 1. In order to compare test/retest reliability reported here with previously reported reliabilities, a Pearson product-moment correlation was performed on the scales of the BSRI yielding the following coefficients: (a) masculine = .87, and (b) feminine = .72.

Table 1

Repeated Measures Chi-square* Test of Association of BSRI Classification Test by Retest

Test \ Retest	Masculine	Feminine	Androgynous	Test Totals
Masculine	2	0	3	5
Feminine	0	8	1	9
Androgynous	1	0	6	7
Retest Totals	3	8	10	21

* X^2 (4) = 19.08, $p < .01$.

Test of Hypotheses

Hypothesis Concerning the Difference Between Scores Obtained on the STAI for Trait Anxiety

Null Hypothesis 1. There will be no significant differences between the levels of trait anxiety of the three sex-role classifications.

Mean trait anxiety scores were calculated for each classification. These means and their standard deviations are reported in Table 2. It should be noted that all of the means fell within close proximity of one another reporting average levels of trait anxiety with no extreme scores. A one-way analysis of variance was performed to test this hypothesis of difference. As shown in Table 2, no significant difference was found. The null hypothesis was not rejected.

Hypothesis Concerning the Differences Between Scores Obtained on the STAI for State Anxiety

Null Hypothesis 2. There will be no significant differences in state anxiety across sex-role classifications and activities.

Mean scores were calculated for state anxiety for each classification in each activity. These means and their standard deviations are reported in Table 3. It should be noted that the means fell within close proximity to one another, reporting average levels of state anxiety with no extreme scores.

Table 2

Means, Standard Deviations, and ANOVA for Trait Anxiety by Sex-role Classifications

Sex-Role Classifications						
Masculine		Feminine		Androgynous		
M	SD	M	SD	M	SD	F
34.08	6.9	39.94	7.06	38.46	7.42	2.54

Table 3

Means and Standard Deviations of State Anxiety for Sex-role and Activity Classifications

	Sex-Role Classification						
Activity	Masculine		Feminine		Androgynous		Total
	M	SD	M	SD	M	SD	M
Masculine	39.85	8.9	40.69	10.6	37.38	8.6	39.40
Feminine	34.92	9.3	35.75	8.8	32.00	8.7	34.33
Neutral	32.31	8.1	32.63	10.4	33.31	7.9	32.74
Total	35.69		36.35		34.23		

A two-way analysis of variance utilizing a 3 x 3 factoral design was used to test this hypothesis. The results are presented in Table 4. There was no significant difference found as a result of the interaction of sex-role classification and activity. Sex-role classification as a main effect also failed to show statistical significance. A significant difference was reported for the main effect of activity, evidenced by $F(2, 78) = 4.88$, $p < .01$. On this basis, the null hypothesis was rejected.

Having ascertained statistical difference, the Tukey honestly significant difference (HSD) method was employed for a specific comparison of means. A critical difference of 4.13 was computed. Differences were found in state anxiety levels elicited by each activity in the following directions: (a) state anxiety for the masculine activity was greater than state anxiety for the feminine activity, (b) state anxiety for the masculine activity was greater than state anxiety for the neutral activity, and (c) state anxiety for the feminine and neutral activities were not significantly different.

Summary

Upon completion of preliminary testing, the BSRI was scored utilizing the median split method with standardized medians established by Sandra Bem. A total of 42 subjects from the original subject pool ($N = 126$) was used in the

Table 4

ANOVA for State Anxiety by Sex-role and Activity Classifications

Source	df	MS	F
Sex-Role Classification (A)	2	49.64	.39
Error	39	126.19	
Activity (B)	2	492.48	7.95*
A X B	4	24.22	.39
Error	78	61.95	

* $p < .01$.

remainder of the study, and classified as follows: (a) 13 masculine, (b) 16 feminine, and (c) 13 androgynous.

Test/retest reliability was calculated for the STAI A-trait scale and for the BSRI. Using the Pearson product-moment correlation method, the STAI A-trait scale was found reliable with a coefficient of .84. A chi-square of association was performed on the classifications of the BSRI evidencing a definite pattern in responses given at time 1 and time 2. The Pearson product-moment correlation was performed on the scales of the BSRI yielding the following coefficients: (a) masculine = .87, and (b) feminine = .72.

A one-way analysis of variance was used to investigate differences in trait anxiety between sex-role classifications. No significant differences were found. Null Hypothesis 1 was not rejected.

A two-way analysis of variance was used to investigate differences in state anxiety levels across sex-role classifications and activities. Only the main effect of activities was found significant. The post hoc differences were reported in the following directions: (a) state anxiety for the masculine activity was greater than state anxiety for both the feminine and neutral activities, and (b) state anxiety for the feminine and neutral activities were not significantly different.

Chapter 5

DISCUSSION OF RESULTS

In this chapter, a discussion and explanation of the results reported in Chapter 4 will be presented. The reported reliabilities of the testing instruments is discussed. Reasons are given and empirical evidence cited to explain the failure to reject the null hypothesis concerning trait anxiety and sex-role classifications. For the null hypothesis concerning state anxiety levels as effected by sex-role classification and activity, the only significant main effect was activity. These results are explained in terms of actual anxiety levels elicited and possible causes for their elicitation.

Reliability of Testing Instruments

A confirmation of the reliability of one's testing instruments is important in establishing the value of a given study. Test/retest reliabilities were performed on the BSRI and on the STAI A-trait scale, reporting a high reliability for each. Although the Pearson product-moment correlation coefficients reported for the subscales of the BSRI were not quite as high as those reported by Bem (1974) in earlier studies, they were sufficiently high to establish confidence in this testing instrument. In addition, a 3 x 3 chi-square test of association reported similarity in the patterns of sex-role classification from test to retest. The Pearson product-moment correlation coefficient reported

for the STAI A-trait scale in this study exceeded the coeffcient reported by Spielberger (1966) in earlier testing with a similar population and time interval. Therefore, it can be concluded that the STAI A-trait scale is also a reliable measure.

Statistical Hypotheses Tested

Hypothesis Concerning the Differences Between Scores Obtained on the STAI for Trait Anxiety

There was no statistical evidence provided here to support the hypothesis that feminine subjects would report the highest level of trait anxiety of the three groups tested. The majority of research in this area has reported one of two findings concerning sex-role stereotypes, either: (a) highly sex typed subjects (i.e., masculine males, feminine females) rate highest in trait anxiety, or (b) feminine subjects rate highest in trait anxiety.

From earlier research dealing with the possible restrictiveness of sex roles, it was believed that a highly sex-typed individual was governed by an internalization of sex-appropriate behaviors as promoted by society, and that maintenance of a strict adherence to societal norms produced some personal strain in the form of anxiety (Bem, 1972, 1975). Subsequent research revealed that the feminine sex role, carrying with it certain characteristics devalued by American society, correlated with trait anxiety (Bem, 1976; Gove, 1976;

O'Leary, 1976; Jones et al., 1978). These results concur with the theory of androgyny supporting the androgynous sex role as the optimum profile of mental health (Bem, 1976; Spence et al., 1975).

The present results as well as the research completed by Waters (1977), and Jordan-Viola (1976), are not in agreement with other research in this area. Upon investigating the relationships of sex-role identity, empathy, state and trait anxiety, and intelligence, Waters (1977) reported no correlation for sex-typed subjects and trait anxiety. However, trait anxiety was inversely related to masculinity. Using the Taylor Manifest Anxiety Scale, Jordan-Viola et al. (1976) found a positive correlation between androgyny and anxiety, and a negative correlation for both masculinity and femininity, and anxiety.

In the present study, not only were the mean scores for trait anxiety across the three sex-role classifications not significantly different from one another, but the scores fell within the intermediate anxiety range in close proximity to one another. This meant that all of the subjects sampled could be described as being moderately trait anxious or possessing "moderate levels of tension and apprehensiveness . . ." (Spielberger, 1976, p. 9).

With none of the groups rating either high or low in

trait anxiety and no significant differences reported, the results of testing this hypothesis neither confirm nor deny the theory of androgyny related to anxiety. It suggests however, that perhaps sex-role classification alone is not sufficient grounds upon which to predict trait anxiety level.

Hypothesis Concerning the Differences Between Scores Obtained on the STAI for State Anxiety

For this hypothesis, the interaction of sex-role classification and type of activity, as well as the separate main effects for the aforementioned variables, were observed in relation to differences in state anxiety levels. Only the main effect for the type of activity was reported significant. This indicated that all subjects, regardless of sex-role classification, reported similar levels of state anxiety for a given activity.

The treatment testing session was designed to investigate the hypothesized adaptability of behavior associated with an androgynous sex role. Several recent studies concerning sex role and behavioral adaptability have reported results supporting the theory of androgyny. Bem (1975) found androgynous subjects displaying more "masculine independence" and "feminine playfulness" than either sex-typed or sex-crossed subjects. In 1976, Bem and Lenney reported avoidance of cross-sex behavior by sex-typed individuals. "Moreover, actually engaging in cross-sex behavior caused

sex-typed subjects to report greater psychological discomfort and more negative feelings about themselves" (p. 48). Nevill (1977) reported that the androgynous person scored more favorably than the other sex-role classifications on the Tennessee Self Concept Scale and on the Personal Orientation Inventory, indicating more effective social functioning and a higher degree of psychological health for the androgynous individual. In testing self-esteem and ego development in female undergraduates, Schiff and Koopman (1978) reported androgynous subjects scoring high in both, with feminine and masculine subjects reporting deficits in self-esteem and ego development, respectively.

In addition to the research that lends support to the behavioral aspect of the theory of androgyny, there is some research that questions this aspect of the theory. A study investigating the relationship between sex-role classification and self-actualization reported that androgynous subjects scored no differently than either masculine or feminine subjects (Ginn, 1975). In a study involving behavioral flexibility as related to social adjustment, Jones et al. (1978) reported masculine subjects scoring higher than androgynous subjects regardless of gender. Waters (1977) investigated the relationship of sex-role identity, empathy, state and trait anxiety, and intelligence, concluding,

"Sex typing does not appear to have a significant effect on state anxiety . . . " (p. 35).

The results of the present study are in agreement with those of Waters (1977) in that state anxiety levels were not significantly effected by sex-role classification. These results and those of Waters neither support nor deny the theory of androgyny as related to behavioral adaptability since there was a lack of significance in any direction. In other words, the lack of statistical significance reported upon testing this hypothesis does not refute the theory of androgyny. It simply does not support the theory.

As reported earlier, a significant difference was found in levels of state anxiety reported for activities. The levels of state anxiety elicited by the masculine activity were significantly different from those elicited by either the feminine or neutral activities with no significant difference being reported between the state anxiety levels of the feminine and neutral activities. All subjects regardless of sex-role classification, reported significantly higher levels of state anxiety on the masculine activity than on the feminine or neutral activities. However, it should be noted that none of the reported state anxiety levels were high. As was reported for the trait scores, the state scores can also be described as intermediate, and associated with "moderate levels of tension and apprehensiveness . . ."

(Spielberger, 1976, p. 9).

Since the subjects tested were all female, and reported similar levels of state anxiety for a given activity regardless of sex-role classification, it might be concluded that gender and not sex role is the deciding factor in behavioral adaptability associated with physical activities. However, before this conclusion can be accepted, one must focus upon the nature of the designated activities.

Although the activities seem to be "typical" of the sex role represented, there was a difference between the feminine and neutral activities, and the masculine activity. While the feminine and neutral activities were rather individualized and low key, the masculine activity was a team sport involving competition. In describing state anxiety, Spielberger (1966) says "that anxiety states (A-states) are characterized by subjective consciously perceived feelings of apprehension and tension accompanied by or associated with activation or arousal of the autonomic nervous system" (pp. 16-17). Nideffer (1976) also refers to this elevation in arousal when he says "the state component refers to momentary increases in our level of arousal and anxiety that can be attributed to a particular situation" (p. 75). It is conceivable then, that this moderate elevation in state anxiety level caused by the masculine

activity, could be attributed to an increased level of arousal brought about by the competitive situation. Because the level of state anxiety elicited by the masculine activity stayed well within the intermediate range, it can not be concluded that the subjects became highly anxious in this situation, but only apprehensive and aroused.

In view of these findings, it can not be concluded that the type of activity (i.e., masculine or feminine) is solely responsible for eliciting changes in state anxiety levels. The nature of the activity (i.e., individual or team, competitive or non-competitive) should also be considered.

In designing this study, the nature as well as the type of the activity was considered in choosing the activities to be used. It was discovered, however, that few if any masculine type activities do not involve the element of competition. By attempting to set the boundaries and therefore the generalizability of the results of this study within the realm of physical education and sport, the competition element was inherent in the possible choices of masculine activities. Any attempt to compensate for the competition element in the feminine activity by choosing a more competitive activity such as swimming or gymnastics would have eliminated the potential for role conflict (which was the very basis of the study) by employing an activity that was not highly feminine, but more universal in appeal.

Summary

In this chapter, the reliability of the testing instruments and the results of the hypotheses concerning trait and state anxiety as related to androgyny were discussed. Both the BSRI and the STAI (A-trait scale) were reported as reliable with a test/retest reliability interval of 2-4 weeks. There were no significant differences in the trait anxiety levels of the three sex-role classifications tested. This finding neither confirms nor denies the theory of androgyny as related to anxiety but suggests that sex role alone is not sufficient grounds upon which to predict trait anxiety level. In studying the interactional effect of sex-role classification and type of activity upon level of state anxiety, only the main effect for activity was reported significant. It was suggested that type of activity (i.e., masculine or feminine) was not solely responsible for eliciting higher levels of state anxiety, but that the nature of the activity (i.e., individual or team, competitive or non-competitive) must also be considered.

Chapter 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study examined the effect of sex-role classification and activity on state anxiety levels, and the difference in trait anxiety levels across sex-role classifications. In a classification testing session, 126 female undergraduate students from Ithaca College were administered the BSRI and the STAI A-trait scale. From this pool, 42 subjects were randomly selected to participate in further testing. Subjects participated in three activities. After each activity they completed a STAI A-state scale to assess state anxiety elicited by each activity. Test-retest reliability was calculated on 50% of the subjects for the BSRI using both the chi-square test of association and Pearson product-moment correlation, and on 71% of the subjects for the STAI A-trait scale, using the Pearson product-moment method.

A one-way analysis of variance was performed on the trait anxiety scores obtained for each sex-role classification. No significant differences were found. The null hypothesis was not rejected.

A two-way analysis of variance was performed on the state anxiety scores obtained for each sex-role classification by each activity. Only the main effect of activity revealed significance. The null hypothesis was rejected. A Tukey

HSD was performed on the state anxiety scores for activities for a specific comparison of means. A significant difference was reported for state anxiety levels for the masculine and feminine activities, and between the masculine and neutral activities, with no differences in levels between the feminine and neutral activities.

Conclusions

The following conclusions were drawn from the analysis of the data collected for this study:

1. There appears to be no difference in trait anxiety levels of masculine, feminine, and androgynous female college students.

2. The interaction of sex-role identity and activity is not significant in determining levels of state anxiety.

3. Sex-role identity is not a significant factor in determining levels of state anxiety in same-sex, crossed-sex, and neutral activities.

4. Activity is a significant factor in determining levels of state anxiety.

5. It appears that a masculine activity that is a competitive team sport elicits a significant difference in state anxiety levels across female college students regardless of sex-role identity.

Recommendations

The following recommendations are suggested based on the findings of this study:

1. A similar study should be designed involving activities (excluding competitive sports) that carry a sex-role stereotype but that are homogeneous in nature.

2. A study should be conducted employing the STAI A-trait scale as a screening device, locating high, middle, and low anxious subjects. A measure of sex-role identity should then be administered to them. The frequency with which the sex-role identities fall into the high, middle, and low anxiety ranges should be noted. The results might further define the relationship between trait anxiety and sex-role identity.

Appendix A

SUBJECT INFORMATION SHEET

Name_____

Age_____

Level of School_____

Major_____

Available Times_____

Telephone #_____

Appendix B

INFORMED CONSENT FORM

Subject Copy

The study in which you have been asked to participate is investigating the relationships between various aspects of personality. It will require two separate testing sessions. The first session will take about 20 minutes, and the second session will take about 1½ hours.

The following procedure will be used: At the first session you will be asked to complete the BSRI and the STAI form X-2. Both are paper and pencil tests (self-report forms), which will be used to assess certain aspects of your personality. At the second testing session, you will be asked to take part in three activities, each about 10 minutes long. During each activity you should attend to your mood, or how you feel. Following each activity you will be asked to complete a brief questionnaire, which will be used to assess your moods.

All names will be kept confidential. Numbers will be used to designate subjects throughout the study. If you do not have any questions and you agree to take part in this study, please sign your name in the space provided.

NAME_____

DATE_____

BEM INVENTORY

Developed by Sandra L. Bem, Ph.D.

Name _____ Age _____ Sex _____

Phone No. or Address _____

Date _____ 19 ___ _____

If a student: School _____ Yr. in School _____

If not a student: Occupation _____

DIRECTIONS

On the opposite side of this sheet, you will find listed a number of personality characteristics. We would like you to use those characteristics to describe yourself, that is, we would like you to indicate, on a scale from 1 to 7, how true of you each of these characteristics is. Please do not leave any characteristic unmarked.

Example: sly

Write a 1 if it is never or almost never true that you are sly.
Write a 2 if it is usually not true that you are sly.
Write a 3 if it is sometimes but infrequently true that you are sly.
Write a 4 if it is occasionally true that you are sly.
Write a 5 if it is often true that you are sly.
Write a 6 if it is usually true that you are sly.
Write a 7 if it is always or almost always true that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly," never or almost never true that you are "malicious," always or almost always true that you are "irresponsible," and often true that you are "carefree," then you would rate these characteristics as follows:

Sly	3	Irresponsible	7
Malicious	1	Carefree	5

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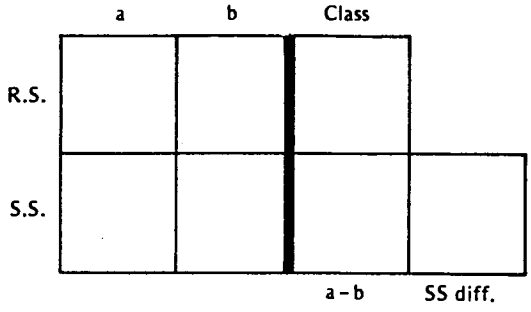
1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

Defend my own beliefs		Adaptable		Flatterable	
Affectionate		Dominant		Theatrical	
Conscientious		Tender		Self-sufficient	
Independent		Conceited		Loyal	
Sympathetic		Willing to take a stand		Happy	
Moody		Love children		Individualistic	
Assertive		Tactful		Soft-spoken	
Sensitive to needs of others		Aggressive		Unpredictable	
Reliable		Gentle		Masculine	
Strong personality		Conventional		Gullible	
Understanding		Self-reliant		Solemn	
Jealous		Yielding		Competitive	
Forceful		Helpful		Childlike	
Compassionate		Athletic		Likable	
Truthful		Cheerful		Ambitious	
Have leadership abilities		Unsystematic		Do not use harsh language	
Eager to soothe hurt feelings		Analytical		Sincere	
Secretive		Shy		Act as a leader	
Willing to take risks		Inefficient		Feminine	
Warm		Make decisions easily		Friendly	



*

Appendix D*

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	①	②	③	④

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SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and "rattled"	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④

Appendix F

STANDARDIZED INSTRUCTIONS FOR TREATMENT SESSION

We are about to begin the second session of testing. During this session the group as a whole will participate in 3 activities. They are floor hockey, ballet, and marching. Each activity will be timed and will continue for 7 minutes. Once we begin the activity, we will not stop until the 7 minutes are up. While engaging in each activity, you should try to imagine yourself as the type of person you are portraying. Be aware of your feelings and moods. How does engaging in this activity make you feel? Don't worry if you have never done these activities before. Although you should try to do your best, level of skill and execution are not important. What is important is how you feel about engaging in each activity.

Are there any questions? In order to most accurately capture the mood, we are going to dress appropriately for each activity.

FLOOR HOCKEY - shin guards, hockey pants, sneakers, hockey sticks, ball.

BALLET - leotards, tights.

MARCHING - street clothes, sneakers.

Appendix G

STANDARDIZED INSTRUCTIONS FOR EACH ACTIVITY

FLOOR HOCKEY

The (1st, 2nd, 3rd) activity that you will participate in is floor hockey. You will be divided into 2 teams. The object of the game is to hit the ball into the other teams goal net with the hockey stick. Try to keep the ball away from opposing team members by passing it to your own team members. You should try to score as many goals as possible in the 7 minutes. Think of yourself as a hockey player. How does that make you feel? Are there any questions? We will begin.

Cue words for experimenter -- (tough, aggressive, strong)

BALLET

For this activity, I will teach you a short sequence of ballet moves. You will be given a few moments to practice. Then as a group you will perform the sequence repeatedly (while I lead you) for 7 minutes. Think of yourself as a ballerina. How does this make you feel? Are there any questions? We will begin.

Sequence -- present right arm, present left arm, port de bras front, pas de bourree left, pas de bourree right, assemble right, soutenu turn right, close.

Cue words for experimenter -- (softly, lightly, gently)

MARCHING

For this activity we will walk around the perimeter of the gym in single file. We will try to keep a moderate tempo. Try to stay in step with the leader. Are there any questions? We will begin.

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